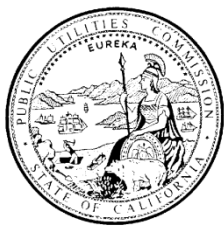




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BEHIND THE METER SAFETY

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Demonstrate that safety is a value in behind the meter storage.

Key points:

- Equipment safety through testing
- Installations per codes
- Safety practices during installation

Benefits:

- Energy storage will be safe for the people who work on it and the for the community that will use it.

Next steps:

- Development of additional safety standards
- Monitoring and communicating safety standards

Cell level safety tests

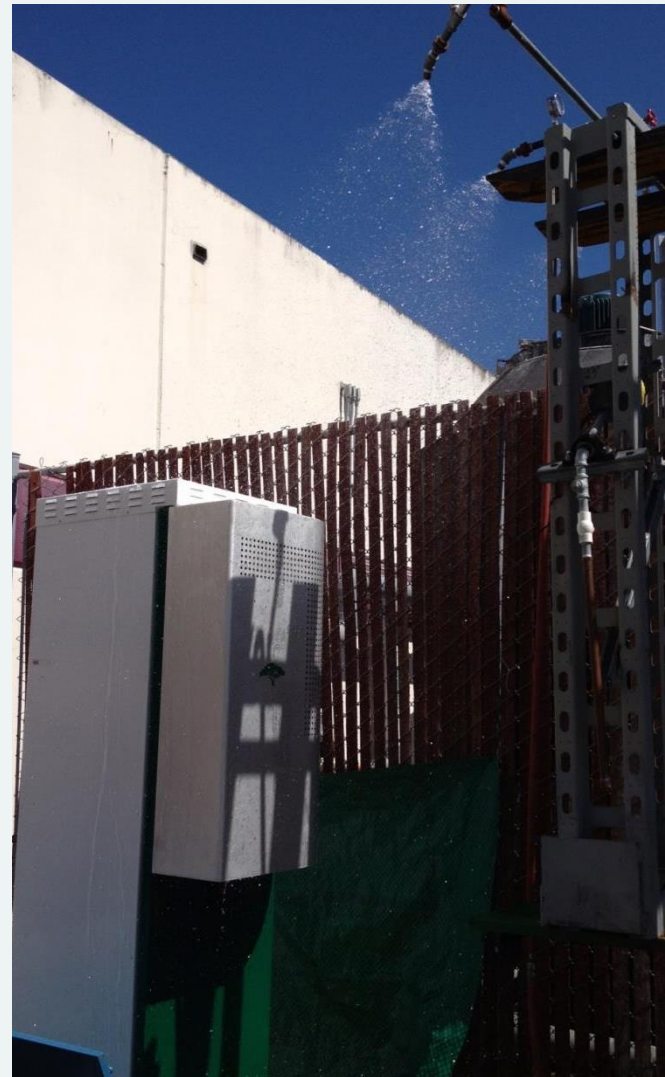
- Mechanical tests
 - Crush
 - Mechanical shock
 - Impact
 - Drop
 - Damp heat/steady state
 - Random vibration
- Thermal
 - Thermal Stability
 - Thermal shock in air
- Electrical Abuse
 - Over charge
 - Over discharge
 - External Short Circuit



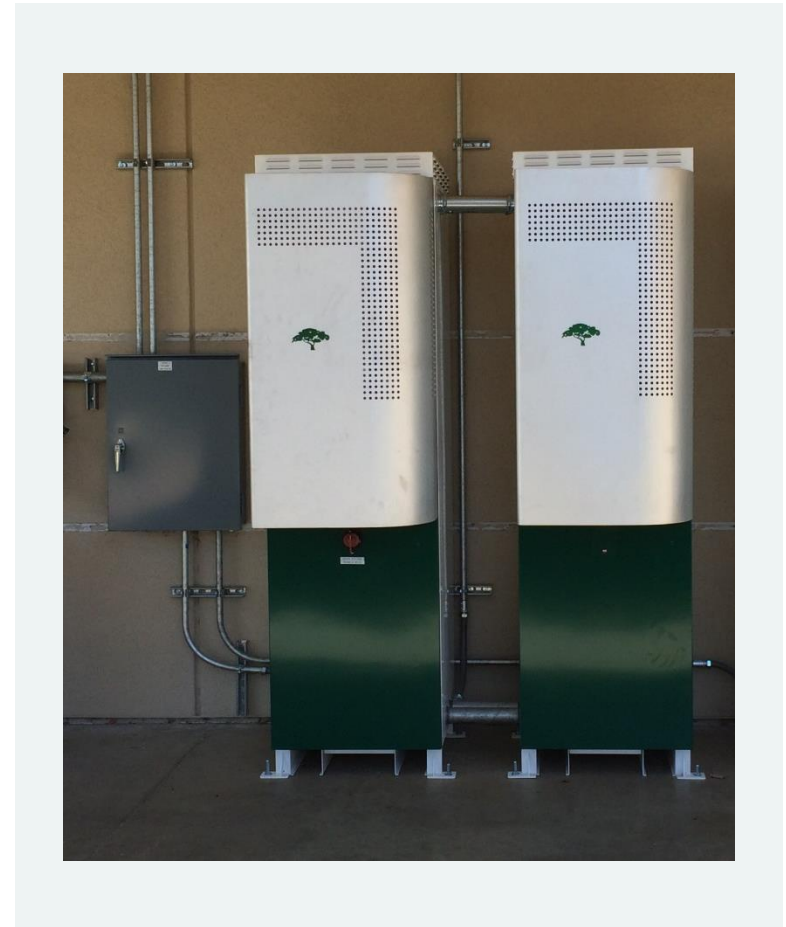
- UL 1642
Cell Safety
- UL 1973
Trays, switchgears
- UN DOT38.3
Shipping of lithium
ion batteries

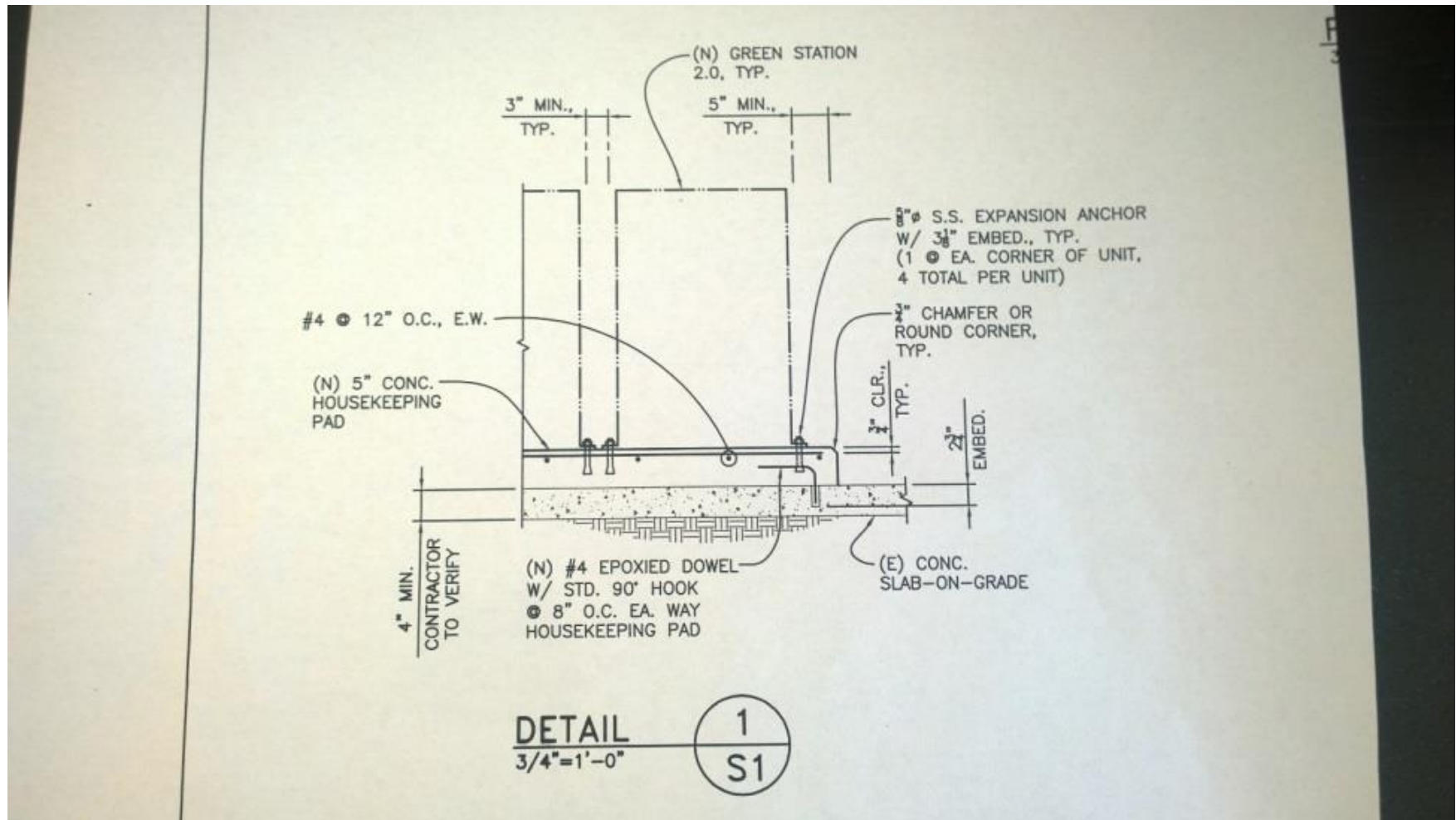


- Vibration
- Humidity
- Temperature



- Drawings are done by registered professional engineer
 - National Electrical Code/California Electrical Code
 - Feeder sizing
 - Grounding
 - Storage Batteries
 - Interconnected Electric Power Production Source
 - CPUC guidelines
 - Rule 2
 - Rule 21
 - SGIP
 - California Building Codes-Seismic Design Factors
 - Risk Category
 - Site Class
 - Seismic Design Category

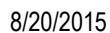




- Seismic Engineering Detail

- Labeling of equipment per all applicable codes and standards





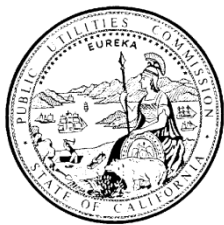
- Use of trained and qualified people to perform installations and maintenance
 - Have injury and illness prevention program
 - Defined lock out/tag out procedure
 - Arc flash PPE Category per NFPA 70E Annex F
 - CAL OSHA requirements
 - Access
 - Branch Circuits
 - Excavation and trenching
 - Crane and rigging
 - Ladder safety
 - Power tools
- Continuous Monitoring
- Yearly Operations and Maintenance Program

- Establish relevant metrics
- Establish safety standards website
- Subscribe for updates
- Create chat forum for ongoing dialog
- Establish social media sites for ongoing updates
- Quarterly conference calls





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